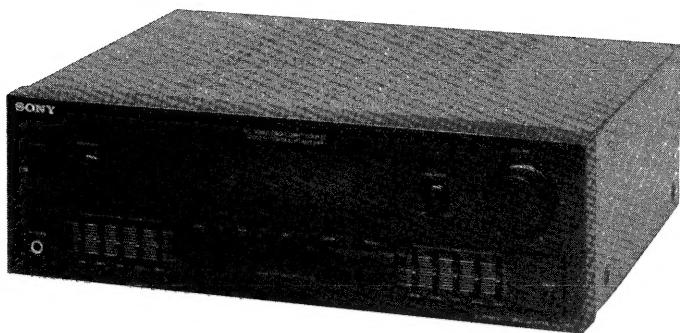


TA-AX311

SERVICE MANUAL

US Model
Canadian Model
E Model
Australian Model



SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 8-ohm loads, both channels driven, from 40 - 20,000 Hz; rated 110 watts per channel minimum RMS power, with less than 0.9% total harmonic distortion from 250 milliwatts to rated output.

Inputs

	Sensitivity	Impedance
PHONO	3.0 mV	50 kohms
TUNER, CD, VIDEO, TAPE	250 mV	50 kohms

Output	REC OUT: Voltage 250 mV, impedance 1 kohm SPEAKER: Accepts speakers of 8 to 16 ohms HEADPHONES: Accepts headphones with low and high impedance
Frequency response	PHONO: RIAA curve TUNER/CD/VIDEO/TAPE: 30 Hz - 30 kHz ± 3 dB
GRAPHIC EQUALIZER controls	Boost/Cut range: ± 8 dB (100 Hz, 330 Hz, 1 kHz, 3.3 kHz) ± 6 dB (10 kHz)
Dimensions	Approx. 430 x 145 x 360 mm (w/h/d) (17 x 5 $\frac{1}{8}$ x 14 $\frac{1}{8}$ inches)
Weight	Approx. 9.5 kg (20 lb. 15 oz.)

Design and specifications subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK OR DOTTED LINE WITH MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

INTEGRATED STEREO AMPLIFIER
SONY®

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

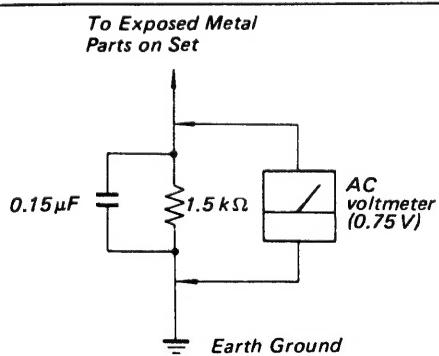


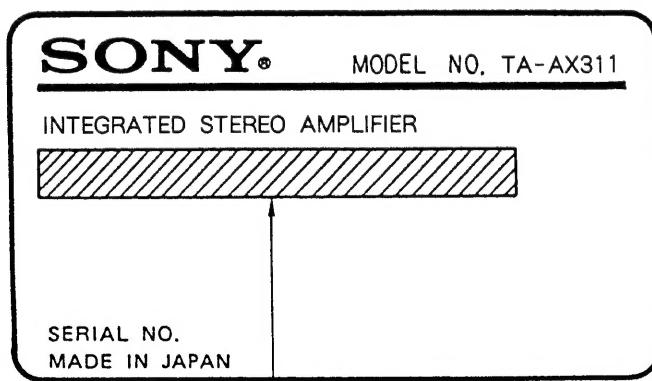
Fig. A. Using an AC voltmeter to check AC leakage.

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MODEL IDENTIFICATION

— Specification Label —



US, Canadian models : AC 120V, 60Hz

200W (U) 400VA (CA)

Australian model : AC 220V~50/60Hz 220W

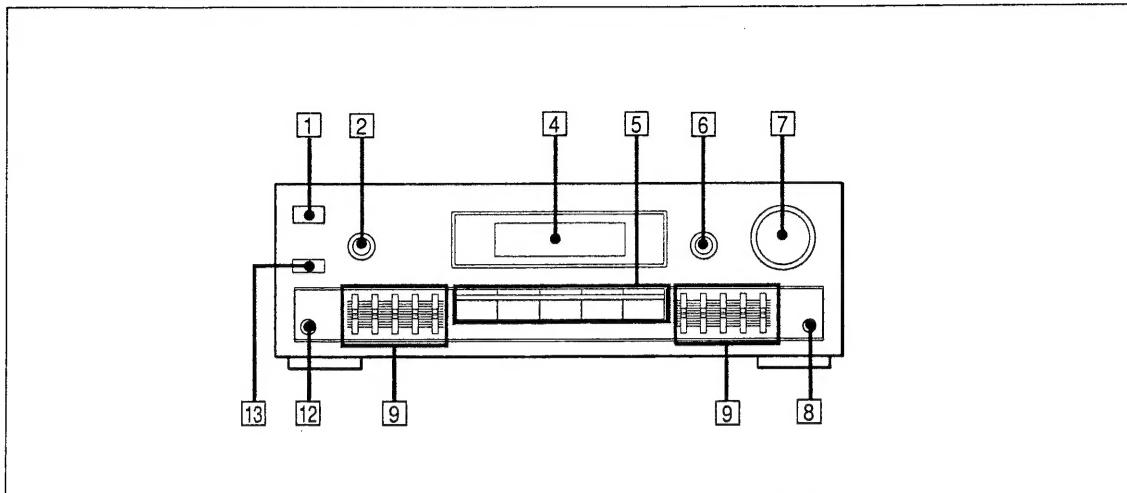
E model : AC 120/220/240V~50/60Hz
220W

SECTION 1

GENERAL

This section is extracted from instruction manual.

1-1. Location and Function of Controls



Amplifier

1 SYSTEM POWER switch

When the SYSTEM POWER switch is turned ON, the settings on the display panel are automatically reset to the original setting.

2 SPEAKERS selector

4 Display window

5 Function selectors

6 BALANCE control

7 MASTER VOLUME control

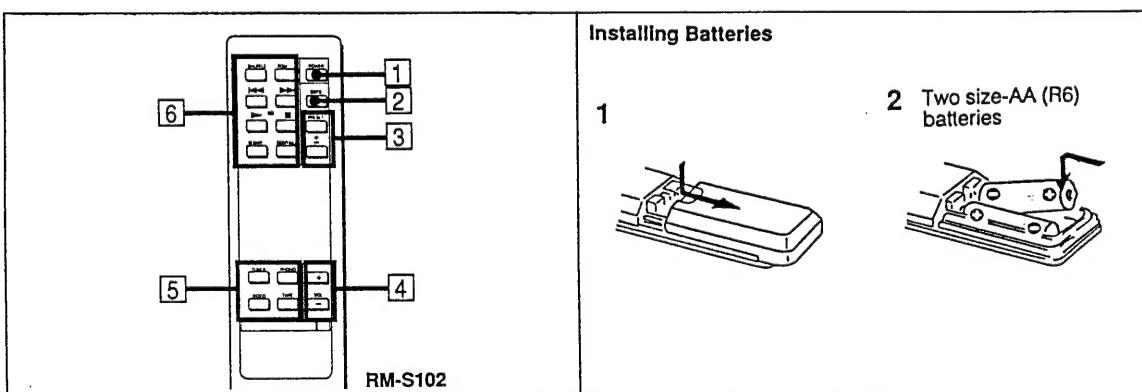
8 DBFB switch

9 Graphic equalizer controls

12 HEADPHONES jack

13 Remote control sensor

Remote Commander



1 POWER button

2 DBFB button

3 TUNER PRESET +/- buttons

4 VOL (volume) +/- buttons

5 Function selectors

6 CD player operation buttons

CD ▶: Selects the CD function and starts CD playback.

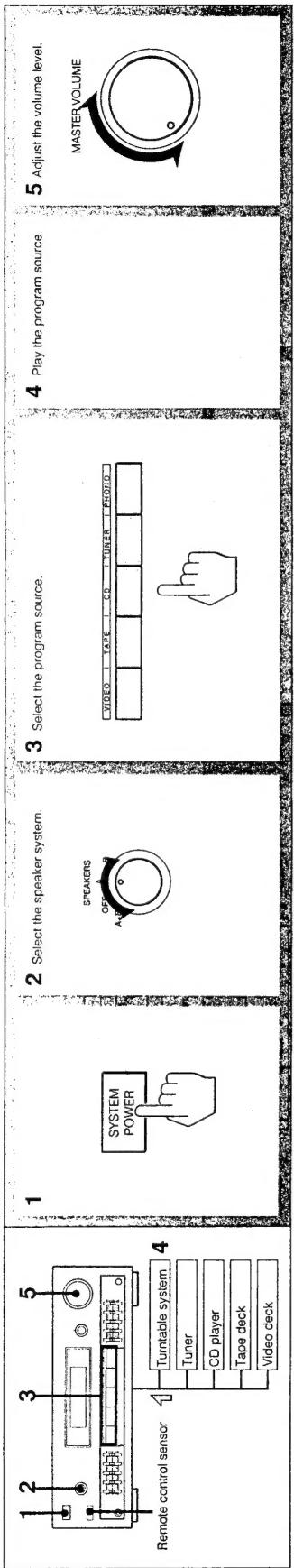
Battery life

About half a year of normal operation can be expected when using the Sony SUM-3 (NS) batteries. When the batteries are exhausted, the remote commander can no longer operate the unit. If this happens, replace both batteries with new ones.

To avoid battery leakage

When the commander is not be used for a long time, remove the batteries to avoid damage caused by battery leakage and corrosion.

Listening to a Program Source



Selecting the speaker system

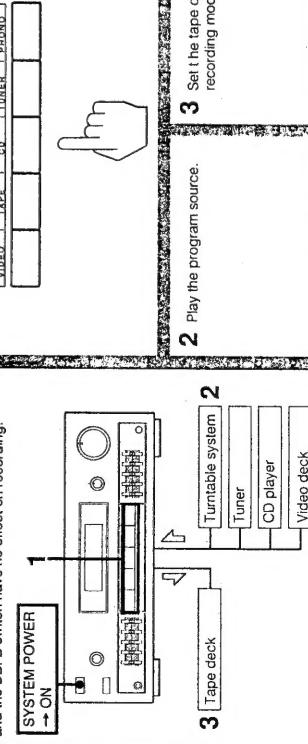
To drive speaker system A: Set SPEAKERS to 'A'.
 To drive speaker system B: Set SPEAKERS to 'B'.
 To drive both speakers: Set SPEAKERS to 'A + B'.
 For headphone listening only: Set SPEAKERS to 'OFF'.

Notes

- When SPEAKERS is set to 'A + B', two pairs of speaker systems must be connected. Otherwise, no sound can be heard.
- The sound of rear (surround) speakers are not heard from the headphone.

Recording

You can record any program source using a tape deck connected to the TAPE jacks. The BALANCE, VOLUME, GRAPHIC EQUALIZER controls and the DBFB switch have no effect on recording.



SECTION 2

DIAGRAMS

2-1. DESCRIPTION ON IC101(μ PD75206-717-3BE)

Pin	Port	I/O	ACT	RESET	Outside	
1	RESET	I				DIGIT9
2	t0	O	H	High	L	DIGIT8
3	t1	O	H	High	L	DIGIT7
4	t2	O	H	High	L	DIGIT6
5	t3	O	H	High	L	DIGIT5
6	t4	O	H	High	L	DIGIT4
7	t5	O	H	High	L	DIGIT3
8	t6	O	H	High	L	DIGIT2
9	t7	O	H	High	L	DIGIT1
10	t8	O	H	High	L	NC
11	t9	O	H	High	L	DBFB
12	t10	O	H	High	L	FRONT MUTE
13	t11	O	H	High	L	REAR MUTE
14	t12	O	H	High	L	DRLC CONTROL
15	t13	O	H	High	L	DRLC SW A
16	t14	O	H	High	L	DRLC SW B
17	t15	O	H	High	L	-30V
18	Vload		-	High		-4V
19	Vpre		-	High		NC
20	s9	O	H	High	L	SEG9
21	s8	O	H	High	L	SEG8
22	s7	O	H	High	L	SEG7
23	s6	O	H	High	L	SEG6
24	s5	O	H	High	L	SEG5/KEY OUT5
25	s4	O	H	High	L	+5V
26	V _{DD}			High		SEG4/KEY OUT4
27	s3	O	H	High	L	SEG3/KEY OUT3
28	s2	O	H	High	L	SEG2/KEY OUT2
29	s1	O	H	High	L	SEG1/KEY OUT1
30	s0	O	H	High	L	KEY IN 1
31	p00	I	H	In	L	KEY IN 2
32	p01	I	H	In	L	

High : High - impedance status

In : Input status

Pin	Port	I/O	ACT	RESET	Outsided	
33	p02	I	H	In	L	KEY IN 3
34	p03	I	H	In	L	KEY IN 4
35	p10	I	H	In		RM - 1
36	p11	I	H	In		RM - 2
37	p12	I	L	In		DRLC SW
38	p13	I	L	In		POWER SW
39	p20	O	H	In	L	ST LC7535/LC7822
40	p21	O	L	In	L	ST LV1001M
41	p22	O	H	In	L	SV MSM59371
42	p23	O	H	In	L	VOL +
43	p30	O	H	In	L	VOL -
44	p31	O	H	In	L	VIDEO A
45	p32	O	H	In	L	VIDEO B
46	p33	O	L	In	L	TC PAUSE/PRO LOGIC
47	p60	O	H	In	L	STOP
48	p61	O	H	In	L	CLOCK
49	p62	O	H	In	L	DATA
50	p63	O	H	In	L	FRONT SP relay
51	p40	O	L	In	L	RECOUT SW V1
52	p41	O	L	In	L	RECOUT SW V2
53	p42	O	L	In	L	RECOUT SW TAPE
54	p43	O	H	In	L	POWER RELAY
55	ppo	O	H	In	L	REAR SP relay
56	x1					
57	x2					
58	Vss					
59	xt1					
60	zt2					
61	p50	O	H	In		DRLC READY
62	p51	O	H	In		MIX SW
63	p52	O	H	In		DOLBY SW
64	p53	O	H	In		SIM SW

High : High-impedance status

In : Input status

2-2. KEY OPERATION

Key input has priority over serial input.

(1) Setting

KEY OUT KEY IN	S0	S1	S2	S3	S4
P00	PHONO	TUNER	CD	TAPE	VIDEO01
P02	DBFB	DELAY	DOLBY	HALL	SIMULATED

Note 1. SURROUND ON/OFF.

(2) FUNCTION Key (PHONO, TUNER, CD, TAPE, VIDEO1-4) operation

These keys execute operations below when pressed.

FUNCTION IC Serial data

REC OUT SW Static data

VIDEO SW Static data

FRONT MUTE One shot

REAR MUTE One shot

(3) REAR MUTE PORT

The port is turned to "H" by switching to SURR ON, MODE or FUNCTION.

(Key input, Serial input)

Also the port is "H" three seconds after POWER ON is selected.

REAR MUTE PORT has priority over other ports to output when POWER OFF is selected and operates when SUB VOLUME is turned to ∞ .

However there is no output for the port switching the main FUNCTION when DRLC ON is selected.

(4) DRLC CONTROL PORT (used for SP relay too)

The port is turned to "H" only when DRLC ON is selected. (Key input, Serial input)

(5) POWER RELAY PORT

The port is turned to "H" when either POWER ON or

DRLC ON is selected. (Key input, Serial input RM-1,

RM-2) Both MAIN and SUB are turned OFF when

ALL OFF serial input is selected.

(6) DOLBY PORT

The port is turned to "L" HALL or SIM is selected.

(Key input, Serial input)

(7) SIM PORT

The port is turned to "L" when SIM is selected.

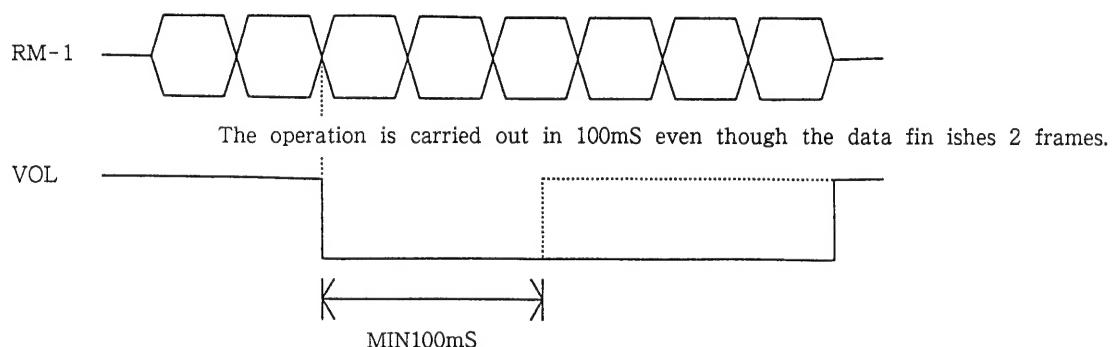
(Key input, Serial input)

The relation between Switch ON and FUNCTION

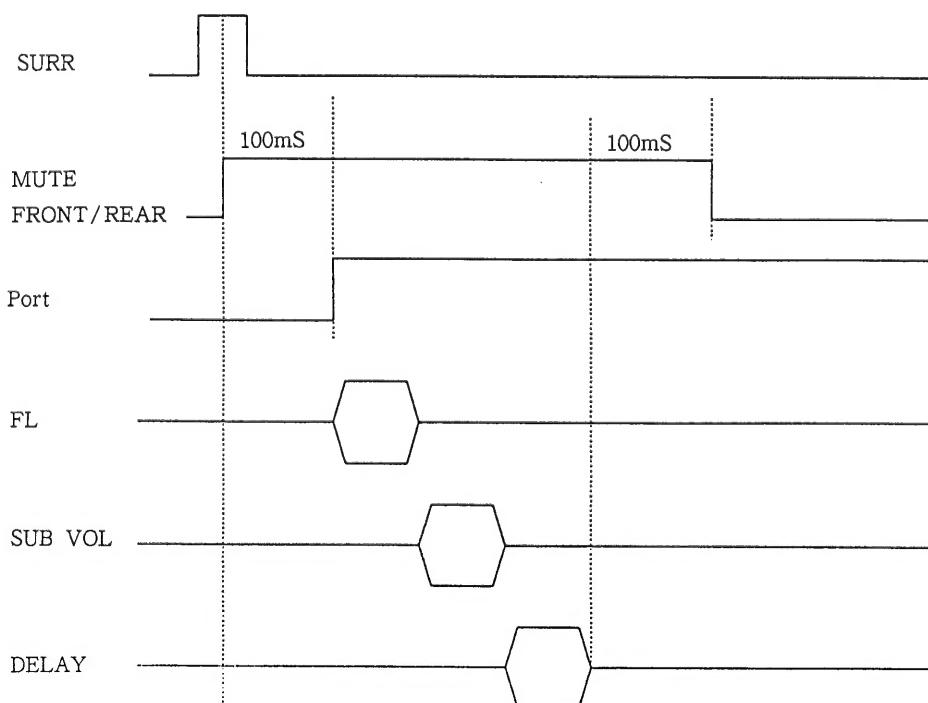
SW	TA-AX311/AV411
1. PHONO	10000001
2. TUNER	01000001
3. CD	00100001
4. TAPE	00010000
5. VIDEO 3	none
6. VIDEO 2	none
7. VIDEO 1	00000011
8. VIDEO 4	none

Timing chart

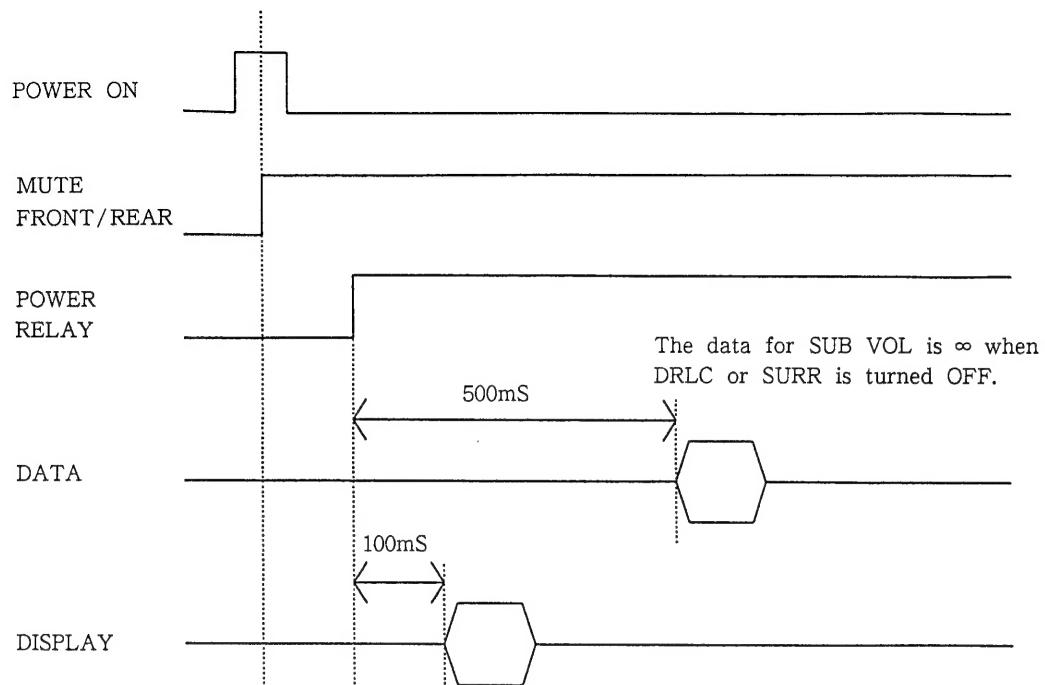
VOL + / -



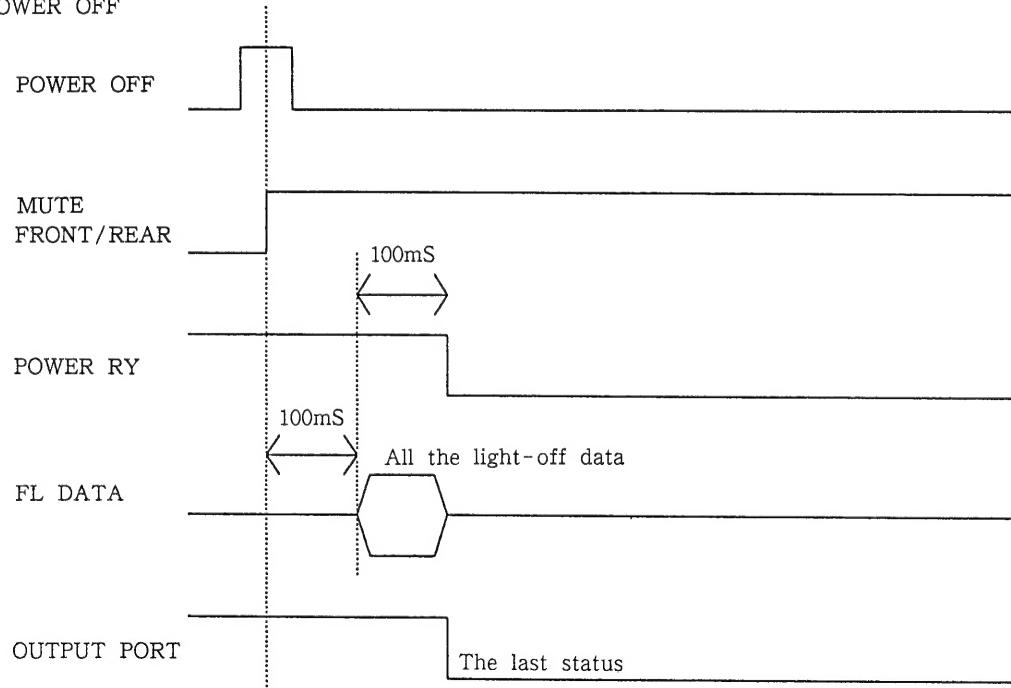
MUTE must be switched 100mS forward or backward during SURR MODE switching (including SURR/OFF switch).



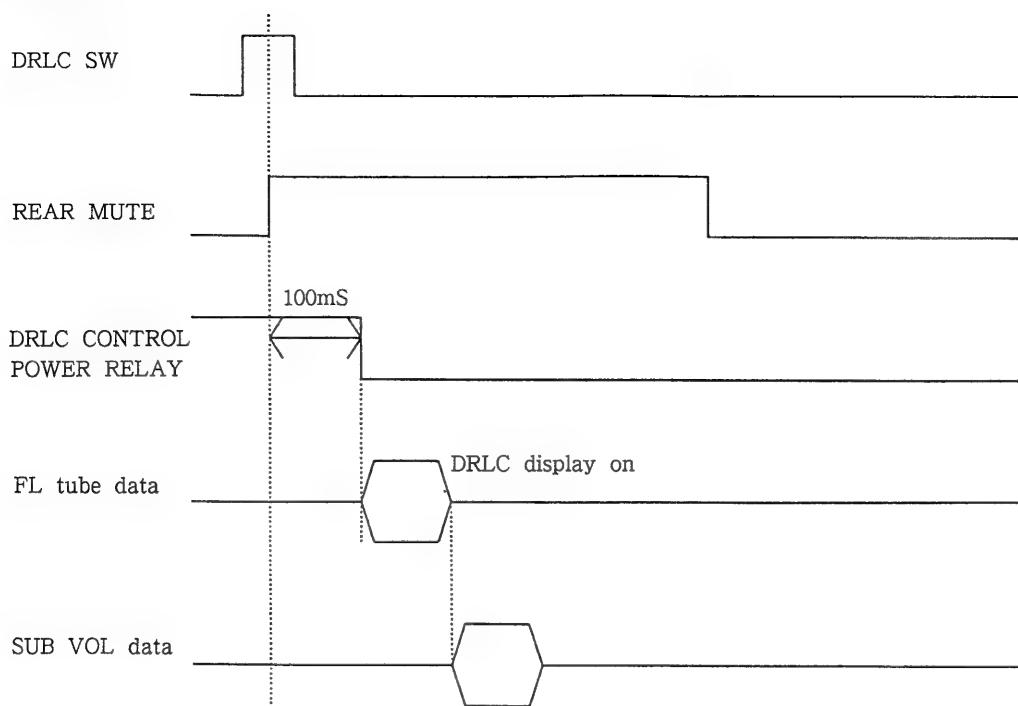
POWER ON (The same operation when starting the buck up system.)



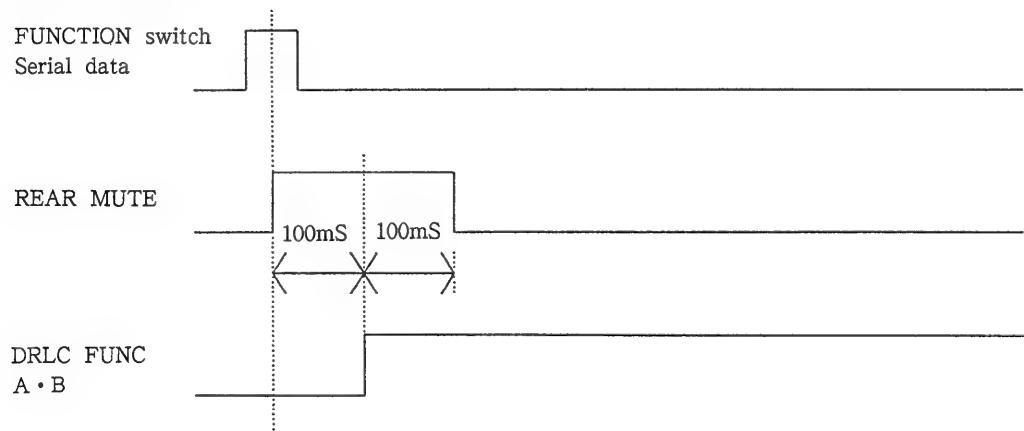
POWER OFF



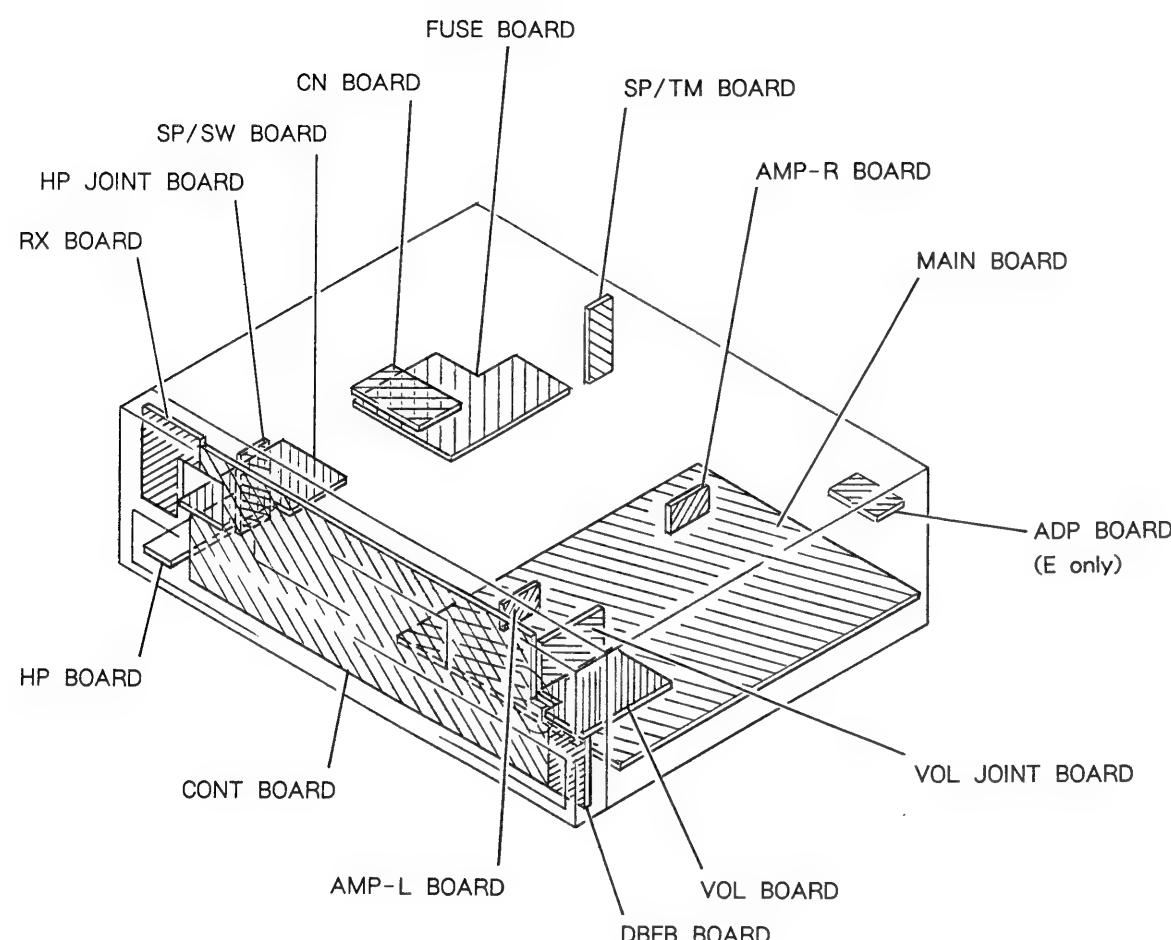
Timing chart
DRLC



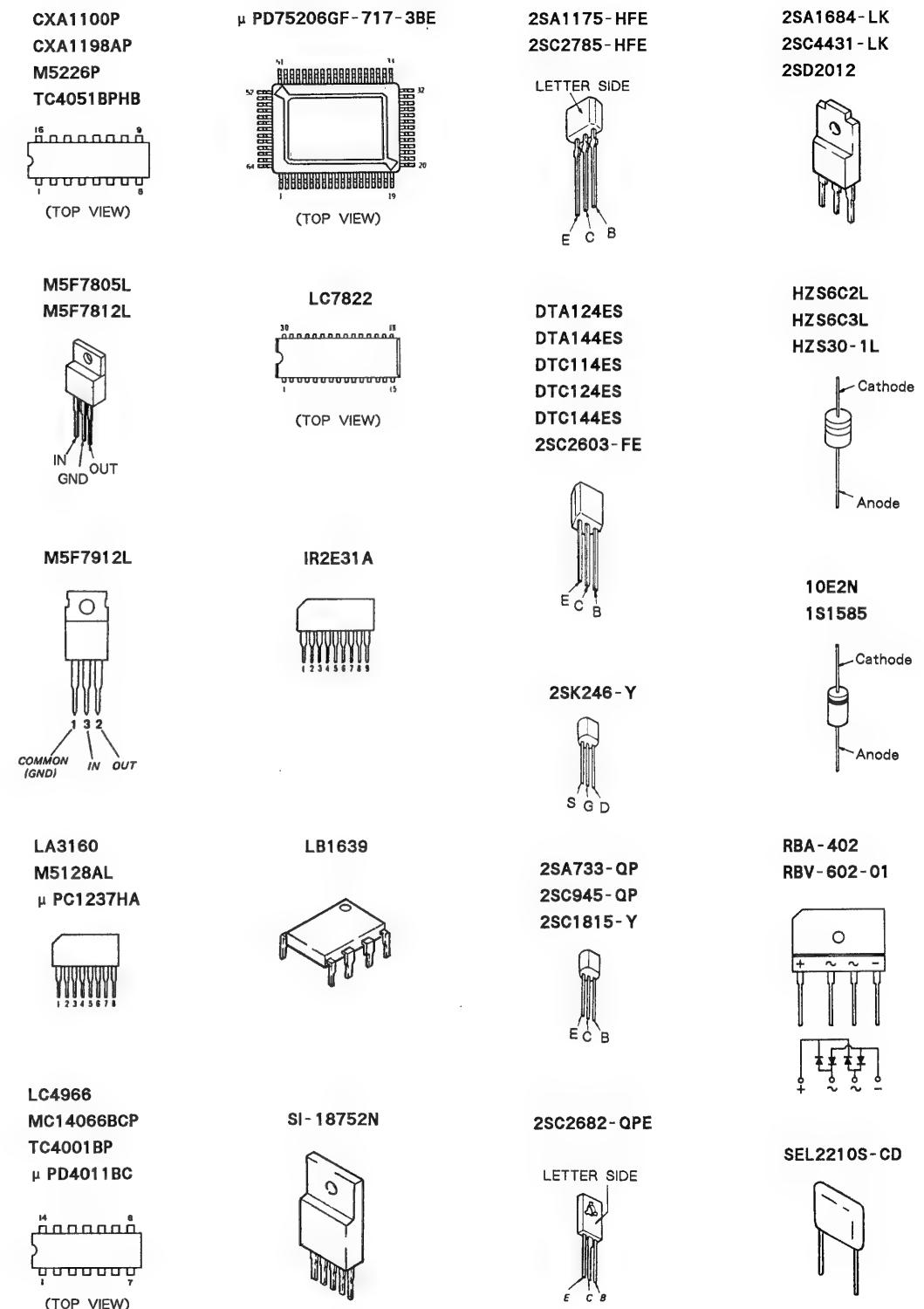
DRLC FUNCTION



2-3. CIRCUIT BOARDS LOCATION



2-4. SEMICONDUCTOR LEAD LAYOUTS



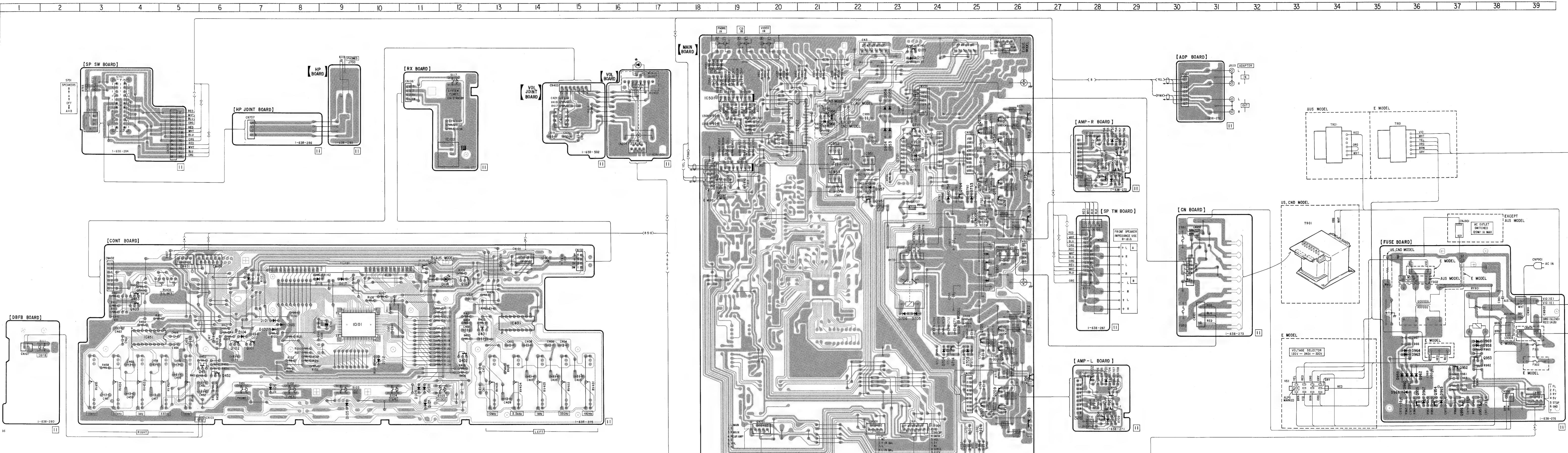
2-5. PRINTED WIRING BOARDS

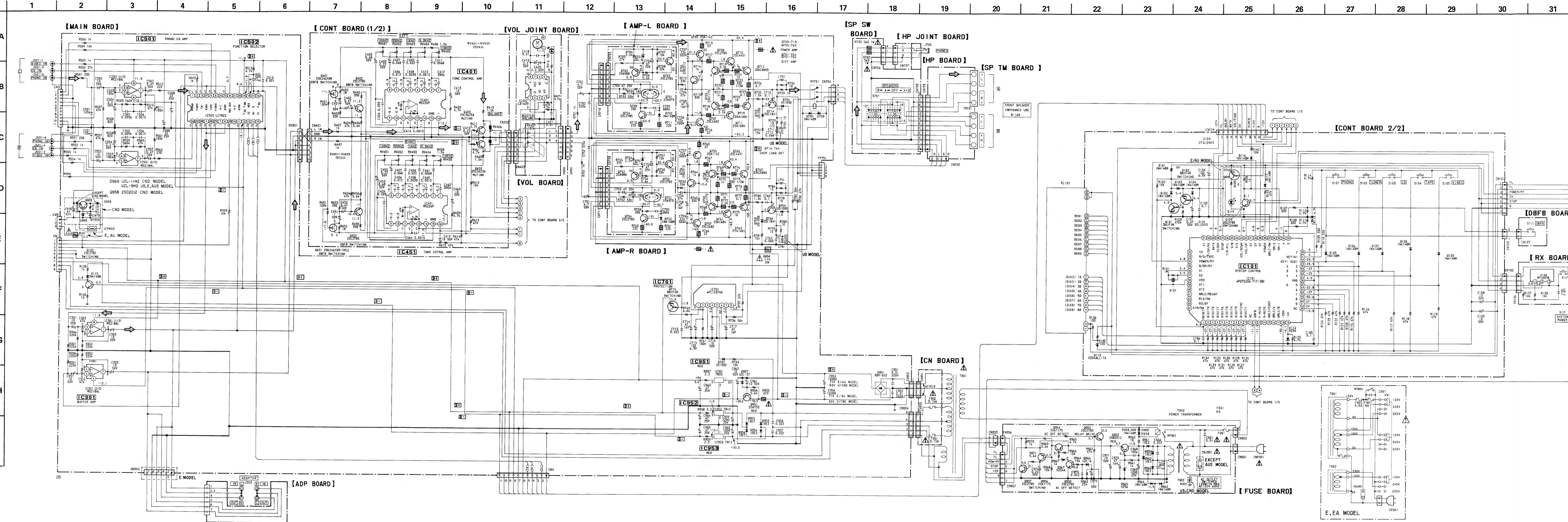
- See page 13 for Semiconductor Lead Layouts

- Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	H-7	Q708	I-26
D102	H-7	Q709	J-26
D103	H-8	Q710	H-26
D104	H-7	Q711	J-26
D105	J-9	Q712	H-26
D106	J-7	Q713	K-26
D107	J-11	Q714	I-24
D108	J-11	Q715	C-23
D109	J-11	Q751	D-28
D112	I-10	Q752	D-28
D113	G-7	Q753	D-29
D114	G-12	Q754	E-28
D115	B-23	Q755	C-25
D116	G-8	Q756	D-26
D117	G-9	Q757	E-25
D701	J-28	Q758	D-26
D702	K-28	Q759	E-26
D703	I-25	Q760	C-26
D704	I-24	Q761	E-26
D705	H-23	Q762	C-26
D706	H-23	Q763	F-26
D707	D-23	Q764	E-25
D751	D-28	Q951	E-22
D752	E-28	Q952	I-37
D753	E-25	Q953	I-37
D754	E-24	Q954	J-36
D951	G-25	Q955	J-36
D953	C-23	Q956	J-37
D954	C-23	Q957	J-37
D955	C-23	Q958	C-21
D956	C-23		
D957	E-22	IC101	H-9
D958	I-37	IC102	D-12
D959	J-36	IC301	D-19
D960	J-36	IC401	H-13
D961	J-36	IC402	C-15
D962	J-36	IC451	I-4
D963	I-36	IC501	C-19
D964	I-36	IC502	C-20
D965	J-37	IC701	D-23
D966	J-36	IC951	D-22
D967	J-36	IC952	D-21
D968	C-21	IC953	E-21
D969	I-37		
Q101	I-7		
Q102	I-6		
Q103	G-12		
Q104	G-11		
Q105	A-23		
Q401	H-13		
Q402	I-12		
Q403	H-4		
Q451	I-6		
Q452	I-6		
Q453	G-4		
Q701	J-28		
Q702	J-28		
Q703	J-28		
Q704	K-28		
Q705	I-25		

Note on Mounting Diagram:





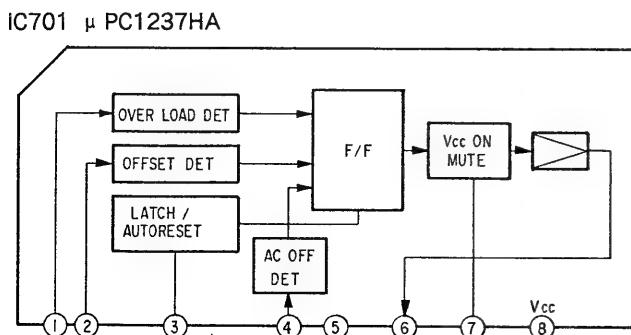
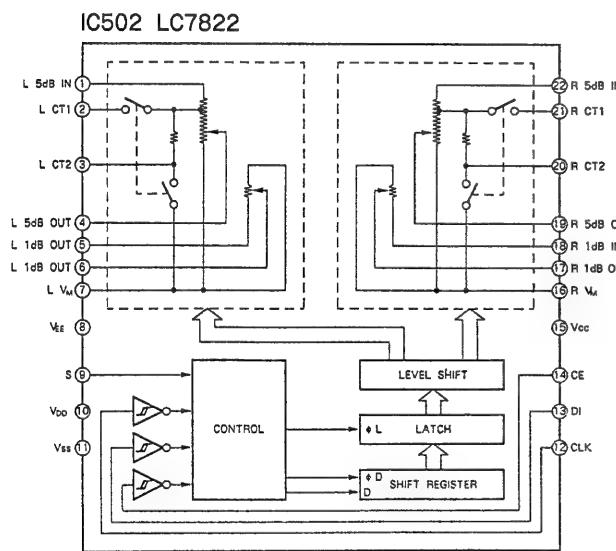
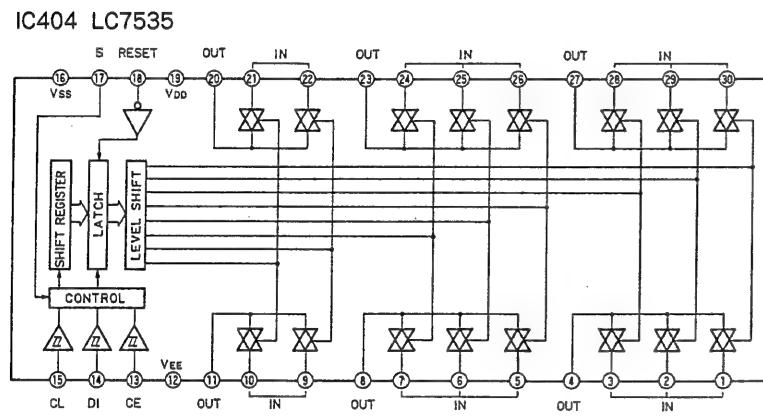
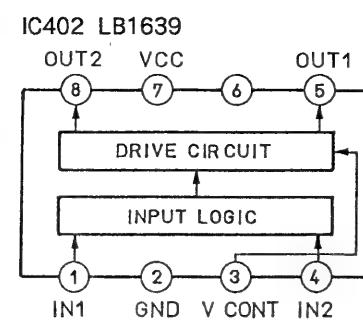
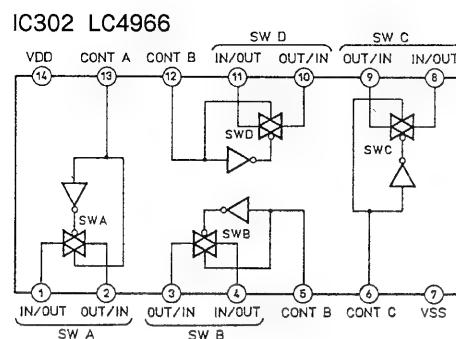
Note on Schematic Diagram:

- All capacitors are in μ F unless otherwise noted. μ : μ V or less are not indicated except for electrolytic and tantalum.
- All resistors are in Ω unless Ω or unless otherwise specified.
- : non-polarized resistor.
- : fuse resistor.

Note: The components identified by mark A are critical for safety. Replacement with part number specified.

- : B Line
- : B Line
- : B Line
- Voltages are taken with a 10M input impedance. 10Ω : Voltages variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path: : PHONO

2-7. IC BLOCK DIAGRAMS



SECTION 3

EXPLODED VIEWS

NOTE :

- - XX, - X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
Example : KNOB, BALANCE (WHITE)...(RED)

Parts color

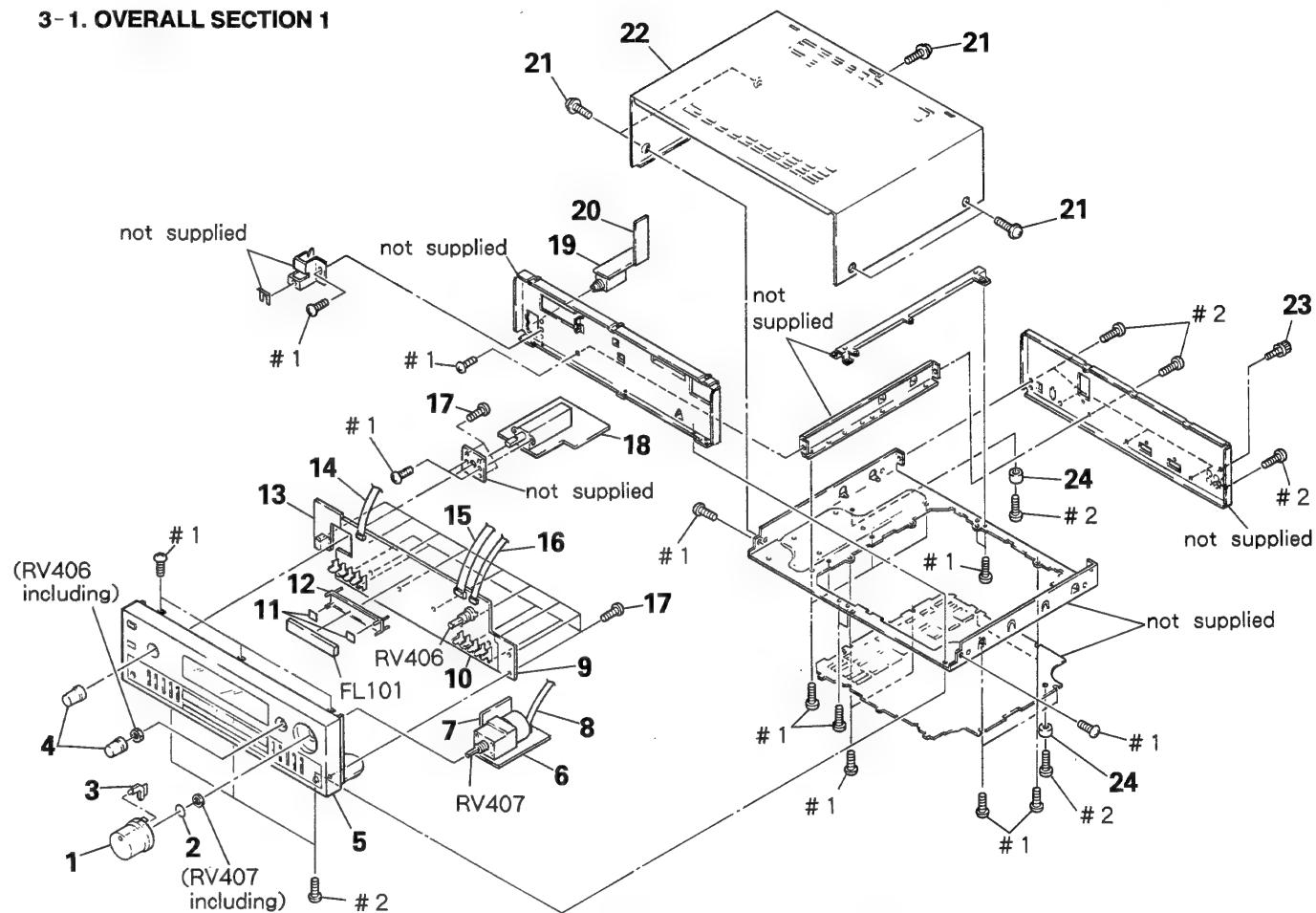
Cabinet's color

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

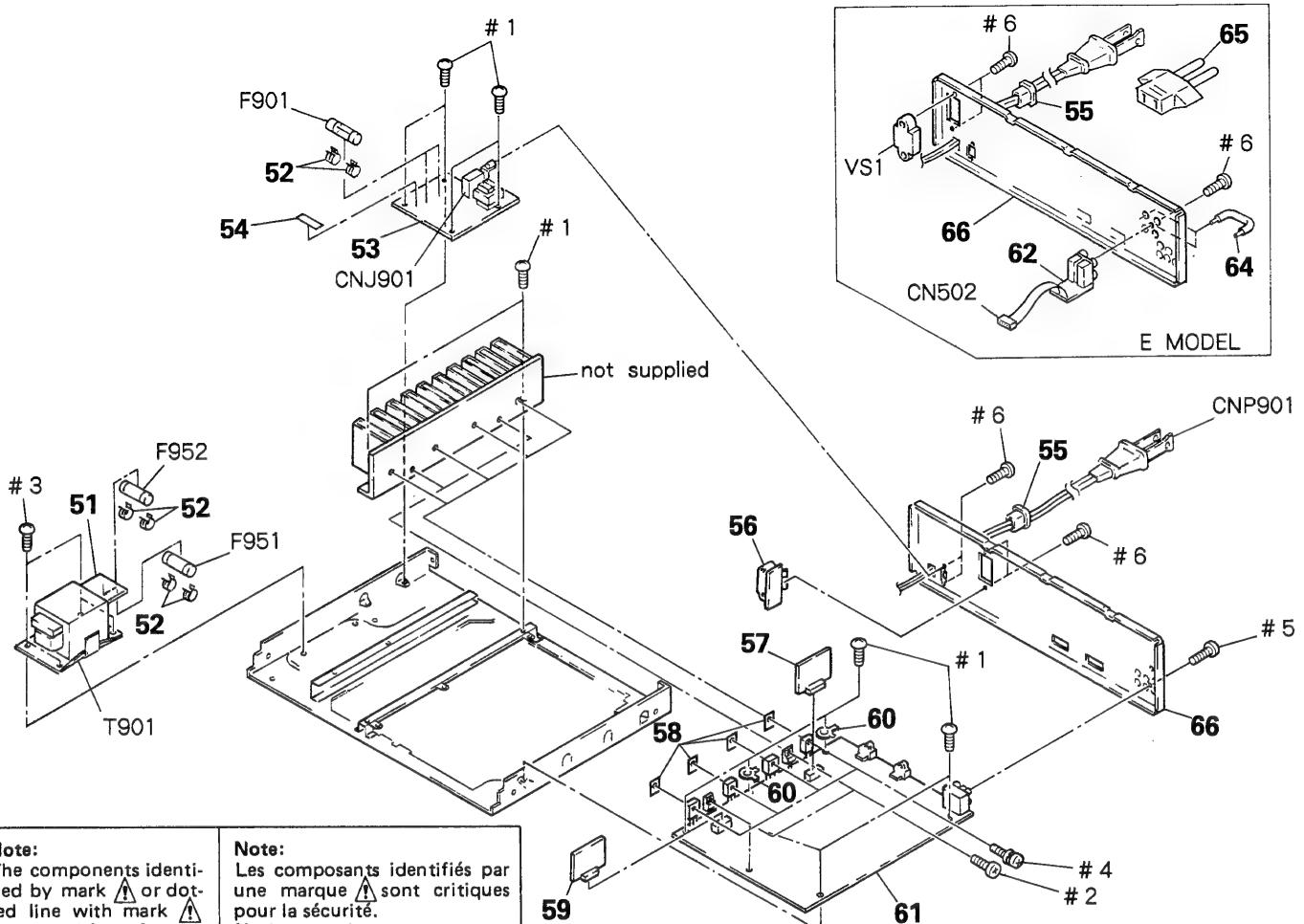
Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

3-1. OVERALL SECTION 1



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	4-943-091-01	KNOB (VOL)		13	* 1-638-277-11	RX BOARD	
2	3-350-426-01	SPRING, RING		14	1-590-486-11	WIRE, FLAT TYPE (7 CORE)	
3	4-943-092-01	PLATE(VOL), LIGHT GUIDE		15	1-590-488-11	WIRE, FLAT TYPE (11 CORE)	
4	4-943-420-01	KNOB (DIA. 19)		16	1-590-538-11	WIRE, FLAT TYPE (7 CORE)	
5	A-4323-865-A	PANEL ASSY, FRONT (US, Canadian)		17	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
	A-4323-867-A	PANEL ASSY, FRONT (E, Australian)		18	* 1-638-284-11	SP SW BOARD	
6	* 1-638-278-11	VOL BOARD		19	* 1-638-285-11	HP BOARD	
7	* 1-638-279-11	VOL JOINT BOARD		20	* 1-638-286-11	HP JOINT BOARD	
8	1-590-485-11	WIRE, FLAT TYPE (7 CORE)		21	3-704-366-01	SCREW (CASE) (M3X8)	
9	* 1-638-280-11	DBFB BOARD		22	4-931-031-11	CASE	
10	* A-4341-710-A	CONT BOARD, COMPLETE (US, Canadian)		23	3-706-165-00	SCREW	
	* A-4341-715-A	CONT BOARD, COMPLETE (E, Australian)		24	X-4941-229-1	FOOT ASSY (F2112S-M)	
11	* 4-921-941-01	CUSHION (FL)					
12	* 4-943-107-01	HOLDER (FL TUBE)					

3-2. OVERALL SECTION 2



<p>Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.</p>	<p>Note: Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
--	--

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
51	* 1-638-273-11	CN BOARD
52	1-533-217-31	HOLDER, FUSE
53	* 1-638-276-11	FUSE BOARD
54	* 3-701-947-16	LABEL (T3.15A), FUSE (E, Australian)
55	* 3-703-244-00	BUSHING (2104), CORD (US, Canadian, Australian)
	* 3-703-571-11	BUSHING (S) (4516), CORD (E)
56	* 1-638-287-11	SP TM BOARD
57	* 1-638-272-11	AMP-R BOARD
58	4-911-232-01	SHEET, INSULATING
59	* 1-638-271-11	AMP-L BOARD
60	* 4-942-204-01	PLATE, GROUND
61	* A-4341-708-A	MAIN BOARD, COMPLETE (US)
	* A-4341-713-A	MAIN BOARD, COMPLETE (E)
	* A-4341-814-A	MAIN BOARD, COMPLETE (Australian)
	* A-4341-950-A	MAIN BOARD, COMPLETE (Canadian)
64	1-535-530-11	PLUG, JUMPER (E)
65	△1-569-007-11	ADAPTER, CONVERSION 2P (E)

Remarks	Ref. No.	Part No.	Description	Remarks
	66	* 4-943-458-11	PANEL, BACK (US)	
		* 4-943-458-21	PANEL, BACK (E)	
		* 4-943-458-31	PANEL, BACK (Australian)	
		* 4-943-458-41	PANEL, BACK (Canadian)	
	CN502	1-569-132-11	PIN, CONNECTOR 7P	
	CNJ901	△1-540-057-11	OUTLET AC (POLAR) (US, Canadian)	
		△1-540-038-11	OUTLET AC (NON POLAR) (E)	
	CNP901	△1-551-188-XX	CORD, POWER (E)	
		△1-551-478-00	CORD, POWER (US, Canadian)	
		△1-559-912-11	CORD, POWER (Australian)	
	F901	△1-532-237-00	FUSE, TIME LAG (E, Australian)	
		△1-576-110-11	FUSE (US, Canadian)	
	F951	△1-532-237-00	FUSE, TIME LAG (E, Australian)	
		△1-576-107-11	FUSE (US, Canadian)	
	F952	△1-532-237-00	FUSE, TIME LAG (E, Australian)	
		△1-576-107-11	FUSE (US, Canadian)	
	T901	△1-450-368-11	TRANSFORMER, POWER (US, Canadian)	
		△1-450-369-11	TRANSFORMER, POWER (E, Australian)	
	VS1	* 1-571-515-11	SWITCH, POWER VOLTAGE SELECTION (E)	

SECTION 4

ADP

AMP-R

ELECTRICAL PARTS LIST

NOTE :

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- XX, - X mean standardized parts, so they may have some difference from the original one.
- RESISTORS**
All resistors are in ohms.
METAL: metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS**
In each case, u: μ , for example:
uA...: μ A..., μ PA..., μ PA...
uPB...: μ PB..., μ PC..., μ PC...
uPD...: μ PD...
- CAPACITORS**:
uF: μ F
- COILS**
uH: μ H

Ref. No.	Part No.	Description			Remarks		Ref. No.	Part No.	Description			Remarks
	* 1-638-274-11	ADP BOARD (E)	*****						< RESISTOR >			
< CONNECTOR >												
CN502	1-569-132-11	PIN, CONNECTOR					R702	1-249-435-11	CARBON	33K	5%	1/4W
	< JACK >						R703	1-249-409-11	CARBON	220	5%	1/4W
J503	1-580-905-11	JACK, PIN 4P					R704	1-249-421-11	CARBON	2. 2K	5%	1/4W
	(E)						R705	1-249-434-11	CARBON	27K	5%	1/4W
	* 1-638-271-11	AMP-L BOARD					R706	1-249-426-11	CARBON	5. 6K	5%	1/4W
< CAPACITOR >												
C703	1-124-477-11	ELECT	47uF	20%	25V		R707	1-249-429-11	CARBON	10K	5%	1/4W
C704	1-124-477-11	ELECT	47uF	20%	25V		R708	1-249-435-11	CARBON	33K	5%	1/4W
C705	1-162-292-31	CERAMIC	680PF	10%	50V		R709	1-249-411-11	CARBON	330	5%	1/4W
	< CONNECTOR >						R710	△1-247-704-11	CARBON	220	5%	1/4W
CN702	1-560-943-00	PIN, CONNECTOR 9P					R711	△1-247-704-11	CARBON	220	5%	1/4W
	< DIODE >						*****					
D701	8-719-933-40	DIODE	HZS6C2L						< CAPACITOR >			
D702	8-719-987-63	DIODE	1N4148M									
	< TRANSISTOR >								< CONNECTOR >			
Q701	8-729-620-18	TRANSISTOR	2SA979-FG					CN703	1-560-943-00	PIN, CONNECTOR 9P		
Q702	8-729-108-14	TRANSISTOR	2SA988-F						< DIODE >			
Q703	8-729-119-78	TRANSISTOR	2SC2785-HFE (Canadian, Australian, E)									
Q703	8-729-119-78	TRANSISTOR	2SC2785-HFE (US)									
Q704	8-729-119-78	TRANSISTOR	2SC2785-HFE									

AMP-R **CN** **CONT**

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remarks</u>		<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remarks</u>	
< TRANSISTOR >							< CAPACITOR >						
Q751	8-729-620-18	TRANSISTOR	2SA979-FG				C101	1-124-902-00	ELECT	0.47uF	20%	50V	
Q752	8-729-108-14	TRANSISTOR	2SA988-F				C102	1-130-495-00	MYLAR	0.1uF	5%	50V	
Q753	8-729-119-78	TRANSISTOR	2SC2785-HFE				C104	1-124-443-00	ELECT	100uF	20%	10V	
Q754	8-729-119-78	TRANSISTOR	2SC2785-HFE				C105	1-130-495-00	MYLAR	0.1uF	5%	50V	
							C106	1-130-495-00	MYLAR	0.1uF	5%	50V	
< RESISTOR >							C108	1-136-171-00	FILM	0.33uF	5%	50V	
R752	1-249-435-11	CARBON	33K	5%	1/4W		C109	1-136-171-00	FILM	0.33uF	5%	50V	
R753	1-249-409-11	CARBON	220	5%	1/4W		C401	1-124-903-11	ELECT	1uF	20%	50V	
R754	1-249-421-11	CARBON	2.2K	5%	1/4W		C402	1-124-902-00	ELECT	0.47uF	20%	50V	
R755	1-249-434-11	CARBON	27K	5%	1/4W		C403	1-124-254-00	ELECT	0.68uF	20%	50V	
R756	1-249-426-11	CARBON	5.6K	5%	1/4W		C404	1-130-490-11	MYLAR	0.039uF	5%	50V	
R757	1-249-429-11	CARBON	10K	5%	1/4W		C405	1-124-464-11	ELECT	0.22uF	20%	50V	
R758	1-249-435-11	CARBON	33K	5%	1/4W		C406	1-130-484-00	MYLAR	0.012uF	5%	50V	
R759	1-249-411-11	CARBON	330	5%	1/4W		C407	1-130-493-00	MYLAR	0.068uF	5%	50V	
R760	△1-247-704-11	CARBON	220	5%	1/4W		C408	1-130-478-00	MYLAR	0.0039uF	5%	50V	
R761	△1-247-704-11	CARBON	220	5%	1/4W		C409	1-130-487-00	MYLAR	0.022uF	5%	50V	
*****							C410	1-164-086-11	CERAMIC	0.0012uF	10%	50V	
* 1-638-273-11 CN BOARD							C411	1-130-481-00	MYLAR	0.0068uF	5%	50V	
*****							C412	1-162-289-31	CERAMIC	390PF	10%	50V	
< FUSE >							C413	1-124-907-11	ELECT	10uF	20%	50V (US, Canadian)	
*****							C414	1-161-374-11	CERAMIC	0.0015uF	20%	50V	
F951 △1-576-107-11 FUSE (US, Canadian)							C415	1-136-169-00	FILM	0.22uF	5%	50V	
F951 △1-532-237-00 FUSE, TIME LAG (Australian, E)							C417	1-124-907-11	ELECT	10uF	20%	50V (US, Canadian)	
F952 △1-532-237-00 FUSE, TIME LAG (Australian, E)							C451	1-124-903-11	ELECT	1uF	20%	50V	
F952 △1-576-107-11 FUSE (US, Canadian)							C452	1-124-902-00	ELECT	0.47uF	20%	50V	
*****							C453	1-124-254-00	ELECT	0.68uF	20%	50V	
* A-4341-710-A CONT BOARD, COMPLETE (US, Canadian)							C454	1-130-490-11	MYLAR	0.039uF	5%	50V	
*****							C455	1-124-464-11	ELECT	0.22uF	20%	50V	
* A-4341-715-A CONT BOARD, COMPLETE (E, Australian)							C456	1-130-484-00	MYLAR	0.012uF	5%	50V	
*****							C457	1-130-493-00	MYLAR	0.068uF	5%	50V	
* 1-638-275-11 CONT BOARD							C458	1-130-478-00	MYLAR	0.0039uF	5%	50V	
1-241-434-11 RES, VAR, SLIDE 250K							C459	1-130-487-00	MYLAR	0.022uF	5%	50V	
1-533-217-31 HOLDER, FUSE							C460	1-164-086-11	CERAMIC	0.0012uF	10%	50V	
4-352-844-01 PIN, LEAD, COATING							C461	1-130-481-00	MYLAR	0.0068uF	5%	50V	
* 4-921-941-01 CUSHION (FL)							C462	1-162-289-31	CERAMIC	390PF	10%	50V	
* 4-943-107-01 HOLDER (FL TUBE)							C463	1-124-907-11	ELECT	10uF	20%	50V (US, Canadian)	
*****							C464	1-161-374-11	CERAMIC	0.0015uF	20%	50V	

CONT

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
< CONNECTOR >							
CN101	* 1-568-850-11	SOCKET, CONNECTOR 7P		R101	1-247-903-00	CARBON	1M 5% 1/4W
CN102	* 1-565-480-11	CONNECTOR, BOARD TO BOARD 4P		R102	1-249-429-11	CARBON	10K 5% 1/4W
CN104	* 1-568-854-11	SOCKET, CONNECTOR 11P		R103	1-247-895-00	CARBON	470K 5% 1/4W
CN401	* 1-568-850-11	SOCKET, CONNECTOR 7P		R105	1-249-417-11	CARBON	1K 5% 1/4W
CN402	* 1-561-651-00	SOCKET, CONNECTOR 7P					(Australian, E)
< DIODE >							
D101	8-719-987-63	DIODE N4148M		R106	1-249-417-11	CARBON	1K 5% 1/4W
D102	8-719-987-63	DIODE N4148M		R107	1-249-411-11	CARBON	330 5% 1/4W
D103	8-719-987-63	DIODE N4148M		R108	1-249-411-11	CARBON	330 5% 1/4W
D104	8-719-987-63	DIODE N4148M		R109	1-249-411-11	CARBON	330 5% 1/4W
D105	8-719-987-63	DIODE N4148M		R110	1-249-411-11	CARBON	330 5% 1/4W
D106	8-719-987-63	DIODE N4148M		R111	1-249-425-11	CARBON	4.7K 5% 1/4W
D107	8-719-987-63	DIODE N4148M		R112	1-249-425-11	CARBON	4.7K 5% 1/4W
D108	8-719-987-63	DIODE N4148M		R113	1-249-425-11	CARBON	4.7K 5% 1/4W
D109	8-719-987-63	DIODE N4148M		R114	1-249-425-11	CARBON	4.7K 5% 1/4W
D112	8-719-985-53	DIODE HZS4ALL		R115	1-249-437-11	CARBON	47K 5% 1/4W
D113	8-719-985-53	DIODE HZS4ALL		R116	1-249-437-11	CARBON	47K 5% 1/4W
D114	8-719-301-37	DIODE SEL2210S-CD (Australian, E)		R117	1-249-437-11	CARBON	47K 5% 1/4W
D116	8-719-987-63	DIODE N4148M		R118	1-249-437-11	CARBON	47K 5% 1/4W
D117	8-719-987-63	DIODE N4148M		R119	1-249-437-11	CARBON	47K 5% 1/4W
< FILTER >							
FL101	1-519-663-11	INDICATOR TUBE, FLUORESCENT		R120	1-249-437-11	CARBON	47K 5% 1/4W
< IC >							
IC101	8-759-154-40	IC uPD75206-717-3BE		R121	1-249-437-11	CARBON	47K 5% 1/4W
IC401	8-759-602-04	IC M5226P		R122	1-249-437-11	CARBON	47K 5% 1/4W
IC451	8-759-602-04	IC M5226P		R123	1-249-437-11	CARBON	47K 5% 1/4W
< TRANSISTOR >							
Q101	8-729-900-36	TRANSISTOR DTC124ES		R124	1-249-437-11	CARBON	47K 5% 1/4W
Q102	8-729-900-63	TRANSISTOR DTA124ES		R125	1-249-425-11	CARBON	4.7K 5% 1/4W
Q103	8-729-119-78	TRANSISTOR 2SC2785-HFE		R126	1-249-437-11	CARBON	47K 5% 1/4W
Q104	8-729-900-63	TRANSISTOR DTA124ES (Australian, E)		R127	1-249-437-11	CARBON	47K 5% 1/4W
Q401	8-729-224-61	TRANSISTOR 2SK246-Y		R128	1-249-437-11	CARBON	47K 5% 1/4W
Q402	8-729-119-78	TRANSISTOR 2SC2785-HFE		R129	1-249-437-11	CARBON	47K 5% 1/4W
Q403	8-729-141-30	TRANSISTOR 2SC3623A-LK		R130	1-249-437-11	CARBON	47K 5% 1/4W
Q451	8-729-224-61	TRANSISTOR 2SK246-Y		R131	1-249-437-11	CARBON	47K 5% 1/4W
Q452	8-729-119-78	TRANSISTOR 2SC2785-HFE		R132	1-249-437-11	CARBON	47K 5% 1/4W
Q453	8-729-141-30	TRANSISTOR 2SC3623A-LK		R133	1-249-437-11	CARBON	47K 5% 1/4W
				R134	1-249-437-11	CARBON	47K 5% 1/4W
				R135	1-249-405-11	CARBON	100 5% 1/4W
				R136	1-249-405-11	CARBON	100 5% 1/4W
				R142	1-249-429-11	CARBON	10K 5% 1/4W
				R143	1-249-437-11	CARBON	47K 5% 1/4W
				R401	1-249-441-11	CARBON	100K 5% 1/4W
				R402	1-247-903-00	CARBON	1M 5% 1/4W
				R403	1-249-411-11	CARBON	330 5% 1/4W
				R404	1-249-437-11	CARBON	47K 5% 1/4W
				R405	1-249-412-11	CARBON	390 5% 1/4W
				R406	1-249-426-11	CARBON	5.6K 5% 1/4W
				R407	1-249-417-11	CARBON	1K 5% 1/4W

CONT DBFB FUSE

Ref. No.	Part No.	Description			Remarks		Ref. No.	Part No.	Description			Remarks	
R408	1-249-419-11	CARBON	1.5K	5%	1/4W			* 1-638-280-11	DBFB BOARD	*****			
R409	1-249-425-11	CARBON	4.7K	5%	1/4W					*****			
R410	1-249-419-11	CARBON	1.5K	5%	1/4W					< CONNECTOR >			
R411	1-249-425-11	CARBON	4.7K	5%	1/4W					< SWITCH >			
R412	1-249-429-11	CARBON	10K	5%	1/4W			CN107	* 1-568-951-11	PIN, CONNECTOR 2P			
R413	1-249-437-11	CARBON	47K	5%	1/4W					< SWITCH >			
R414	1-249-437-11	CARBON	47K	5%	1/4W			S111	1-554-303-21	SWITCH, TACTILE (DBFB)			
R415	1-249-437-11	CARBON	47K	5%	1/4W					*****			
R451	1-249-441-11	CARBON	100K	5%	1/4W					*****			
R452	1-247-903-00	CARBON	1M	5%	1/4W					*****			
R453	1-249-411-11	CARBON	330	5%	1/4W					*****			
R454	1-249-437-11	CARBON	47K	5%	1/4W					*****			
R455	1-249-412-11	CARBON	390	5%	1/4W					*****			
R456	1-249-426-11	CARBON	5.6K	5%	1/4W					*****			
R457	1-249-417-11	CARBON	1K	5%	1/4W					< CAPACITOR >			
R458	1-249-419-11	CARBON	1.5K	5%	1/4W			C901	1-161-744-00	CERAMIC	0.01uF	400V	
R459	1-249-425-11	CARBON	4.7K	5%	1/4W			C966	1-130-487-00	MYLAR	0.022uF	5% 50V	
R460	1-249-419-11	CARBON	1.5K	5%	1/4W			C967	1-130-487-00	MYLAR	0.022uF	5% 50V	
R461	1-249-425-11	CARBON	4.7K	5%	1/4W			C968	1-162-282-31	CERAMIC	100PF	10% 50V	
		< VARIABLE RESISTOR >						C969	1-124-557-11	ELECT	1000uF	20% 25V	
RV401	1-241-434-11	RES, VAR, SLIDE 250K (100KHz)						C970	1-124-477-11	ELECT	47uF	20% 25V	
RV402	1-241-434-11	RES, VAR, SLIDE 250K (300KHz)						C971	1-124-907-11	ELECT	10uF	20% 50V	
RV403	1-241-434-11	RES, VAR, SLIDE 250K (1kHz)						C972	1-124-903-11	ELECT	1uF	20% 50V	
RV404	1-241-434-11	RES, VAR, SLIDE 250K (3.3KHz)						C973	1-130-487-00	MYLAR	0.022uF	5% 50V	
RV405	1-241-434-11	RES, VAR, SLIDE 250K (10KHz)						C974	1-124-464-11	ELECT	0.22uF	20% 50V	
RV406	1-241-022-11	RES, VAR, CARBON 150K/150K (BALANCE)								< CONNECTOR >			
RV451	1-241-434-11	RES, VAR, SLIDE 250K (10KHz)						CN901	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P			
RV452	1-241-434-11	RES, VAR, SLIDE 250K (300KHz)						CN902	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P			
RV453	1-241-434-11	RES, VAR, SLIDE 250K (1kHz)						CN903	1-535-139-00	BASE POST 2P (E)			
RV454	1-241-434-11	RES, VAR, SLIDE 250K (3.3KHz)						CN904	* 1-535-115-00	TERMINAL (E)			
RV455	1-241-434-11	RES, VAR, SLIDE 250K (10KHz)						CN905	* 1-535-116-00	TERMINAL (E)			
		< SWITCH >								< CONNECTOR >			
S101	1-554-303-21	SWITCH, TACTILE (PHONE)						CN956	* 1-564-777-11	PLUG, CONNECTOR (2.5MM) 2P			
S102	1-554-303-21	SWITCH, TACTILE (TUNER)						CN957	* 1-568-826-11	SOCKET, CONNECTOR 7P			
S103	1-554-303-21	SWITCH, TACTILE (CD)						CNJ901	△1-540-057-11	OUTLET, AC (POLAR) (AC OUTLET) (US, Canadian)			
S104	1-554-303-21	SWITCH, TACTILE (TAPE)						CNJ901	△1-540-038-11	OUTLET, AC (NONPOLAR) (1P) (E)			
S105	1-554-303-21	SWITCH, TACTILE (VIDEO)								< DIODE >			
		< CRYSTAL >						D958	8-719-987-63	DIODE	N4148M		
X101	1-567-775-11	VIBRATOR, CERAMIC						D959	8-719-200-77	DIODE	10E2N		
		*****						D960	8-719-200-77	DIODE	10E2N		
		*****						D961	8-719-200-77	DIODE	10E2N		
		*****						D962	8-719-200-77	DIODE	10E2N		

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.	Note: Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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FUSE **HP** **HP JOINT** **MAIN**

Ref. No.	Part No.	Description		Remarks	Ref. No.	Part No.	Description		Remarks
D963	8-719-987-63	DIODE	N4148M			* 1-638-285-11	HP BOARD		*****
D964	8-719-987-63	DIODE	N4148M						
D965	8-719-933-41	DIODE	HZS6C3L						< JACK >
D966	8-719-933-41	DIODE	HZS6C3L						
D967	8-719-985-53	DIODE	HZS4ALL			J700	1-568-515-21	JACK (LARGE TYPE) (PHONES)	
D969	8-719-987-63	DIODE	11ES2						*****
				< FUSE >					*****
F901	△1-532-237-00	FUSE, TIME LAG (E, Australian)					* 1-638-286-11	HP JOINT BOARD	
F901	△1-576-110-11	FUSE (US, Canadian)						*****	
				< TRANSISTOR >					< CONNECTOR >
0952	8-729-209-15	TRANSISTOR	2SD2012			CN707	* 1-506-509-11	PIN, CONNECTOR 4P	
0953	8-729-119-78	TRANSISTOR	2SC2785-HFE						*****
0954	8-729-119-76	TRANSISTOR	2SA1175-HFE						*****
0955	8-729-119-78	TRANSISTOR	2SC2785-HFE						*****
0956	8-729-119-76	TRANSISTOR	2SA1175-HFE						*****
0957	8-729-119-78	TRANSISTOR	2SC2785-HFE				* A-4341-814-A	MAIN BOARD, COMPLETE (Australian)	
				< RESISTOR >				*****	
R901	1-202-725-00	SOLID	3. 3M	10% 1/2W (US, Canadian)			* A-4341-950-A	MAIN BOARD, COMPLETE (Canadian)	
R960	1-249-396-11	CARBON	18	5% 1/6W			* A-4341-713-A	MAIN BOARD, COMPLETE (E)	
R961	1-249-417-11	CARBON	1K	5% 1/4W				*****	
R962	1-249-437-11	CARBON	47K	5% 1/4W			* A-4341-708-A	MAIN BOARD, COMPLETE (US)	
R963	1-249-433-11	CARBON	22K	5% 1/4W				*****	
R964	1-249-429-11	CARBON	10K	5% 1/4W			* 1-683-270-11	MAIN BOARD	
R965	1-249-425-11	CARBON	4. 7K	5% 1/4W			1-533-217-31	HOLDER, FUSE (US)	
R966	1-249-429-11	CARBON	10K	5% 1/4W			* 4-942-204-01	PLATE, GROUND	
R967	1-249-417-11	CARBON	1K	5% 1/4W					< CAPACITOR >
R968	1-249-429-11	CARBON	10K	5% 1/4W		C301	1-124-907-11	ELECT	10uF 20% 50V
R969	1-249-426-11	CARBON	5. 6K	5% 1/4W		C302	1-162-215-31	CERAMIC	47PF 5% 50V
R970	1-249-417-11	CARBON	1K	5% 1/4W		C303	1-124-907-11	ELECT	10uF 20% 50V
R971	1-249-426-11	CARBON	5. 6K	5% 1/4W		C351	1-124-907-11	ELECT	10uF 20% 50V
				< RELAY >		C352	1-162-215-31	CERAMIC	47PF 5% 50V
RY901	△1-515-617-11	RELAY (Australian, E)				C353	1-124-907-11	ELECT	10uF 20% 50V
RY901	△1-515-701-11	RELAY (US, Canadian)				C501	1-162-283-31	CERAMIC	120PF 10% 50V
				< TRANSFORMER >		C502	1-124-907-11	ELECT	10uF 20% 50V
T902	△1-449-993-21	TRANSFORMER, POWER (US, Canadian)				C503	1-162-282-31	CERAMIC	100PF 10% 50V
T902	△1-450-067-11	TRANSFORMER, POWER (Australian, E)				C504	1-124-925-11	ELECT	2. 2uF 20% 100V
						C506	1-161-374-11	CERAMIC	0. 0015uF 20% 50V
						C507	1-124-902-00	ELECT	0. 47uF 20% 50V
						C508	1-126-233-11	ELECT	22uF 20% 50V
						C509	1-162-294-31	CERAMIC	0. 001uF 10% 50V

Note:
The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.

Note:
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Ne les remplacer que par une pièce portant le numéro spécifié.

MAIN

Ref. No.	Part No.	Description			Remarks		Ref. No.	Part No.	Description			Remarks	
C510	1-162-294-31	CERAMIC	0.001uF	10%	50V		C957	1-130-487-00	MYLAR	0.022uF	5%	50V	
C551	1-162-283-31	CERAMIC	120PF	10%	50V		C958	1-130-487-00	MYLAR	0.022uF	5%	50V	
C552	1-124-907-11	ELECT	10uF	20%	50V		C959	1-124-563-11	ELECT	2200uF	20%	25V	
C553	1-162-282-31	CERAMIC	100PF	10%	50V		C960	1-124-557-11	ELECT	1000uF	20%	25V	
C554	1-124-925-11	ELECT	2.2uF	20%	100V		C961	1-124-907-11	ELECT	10uF	20%	50V	
C555	1-130-480-00	MYLAR	0.0056uF	5%	50V		C962	1-124-907-11	ELECT	10uF	20%	50V	
C556	1-161-374-11	CERAMIC	0.0015uF	20%	50V		C963	1-124-477-11	ELECT	47uF	20%	25V	
C557	1-124-902-00	ELECT	0.47uF	20%	50V		C964	1-124-477-11	ELECT	47uF	20%	25V	
C558	1-126-233-11	ELECT	22uF	20%	50V		C965	1-124-477-11	ELECT	47uF	20%	25V	
C701	1-124-927-11	ELECT	4.7uF	20%	100V		C975	1-124-910-11	ELECT	47uF	20%	50V	(Canadian)
C702	1-162-286-31	CERAMIC	220PF	10%	50V		C976	1-124-910-11	ELECT	47uF	20%	50V	(Canadian)
C706	1-162-209-31	CERAMIC	27PF	5%	50V								< CONNECTOR >
C707	1-161-959-00	CERAMIC	22PF	10%	500V		CN1	1-565-949-11	SOCKET, CONNECTOR 9P (SYSTEM CONTROL 3)				
C708	1-124-477-11	ELECT	47uF	20%	25V		CN3	* 1-566-858-11	SOCKET, CONNECTOR 11P (SYSTEM CONTROL 2, 1)				
C709	1-161-959-00	CERAMIC	22PF	10%	500V		CN5	* 1-564-358-00	PIN, CONNECTOR 3P (Australian, E)				
C710	1-130-495-00	MYLAR	0.1uF	5%	50V		CN301	* 1-568-826-11	SOCKET, CONNECTOR 7P				
C711	1-130-493-00	MYLAR	0.068uF	5%	50V	(Canadian, E, Australian)	CN302	* 1-564-779-11	PLUG, CONNECTOR (2.5MM) 6P (E)				
C712	1-130-489-00	MYLAR	0.033uF	5%	50V (US)		CN701	* 1-568-826-11	SOCKET, CONNECTOR 7P				
C712	1-130-493-00	MYLAR	0.068uF	5%	50V	(Canadian, E, Australian)	CN710	* 1-563-192-11	CONNECTOR (SOCKET) 9P				
C713	1-130-487-00	MYLAR	0.022uF	5%	50V		CN711	* 1-563-192-11	CONNECTOR (SOCKET) 9P				
C714	1-124-477-11	ELECT	47uF	20%	25V		CN903	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P (E)				
C715	1-124-443-00	ELECT	100uF	20%	10V								< DIODE >
C716	1-124-907-11	ELECT	10uF	20%	50V								
C717	1-124-477-11	ELECT	47uF	20%	25V								
C751	1-124-927-11	ELECT	4.7uF	20%	100V		D115	8-719-987-63	DIODE 1N4148M				
C752	1-162-286-31	CERAMIC	220PF	10%	50V		D703	8-719-815-85	DIODE 1S1585				
C756	1-162-209-31	CERAMIC	27PF	5%	50V		D704	8-719-815-85	DIODE 1S1585				
C757	1-161-959-00	CERAMIC	22PF	10%	500V		D705	8-719-987-63	DIODE 1N4148M				
C758	1-124-477-11	ELECT	47uF	20%	25V		D706	8-719-987-63	DIODE 1N4148M (Canadian, E, Australian)				
C759	1-161-959-00	CERAMIC	22PF	10%	500V		D707	8-719-815-85	DIODE 1S1585				
C760	1-130-495-00	MYLAR	0.1uF	5%	50V		D753	8-719-815-85	DIODE 1S1585				
C761	1-130-493-00	MYLAR	0.068uF	5%	50V	(Canadian, E, Australian)	D754	8-719-815-85	DIODE 1S1585				
C762	1-130-489-00	MYLAR	0.033uF	5%	50V (US)		D951	8-719-302-38	DIODE RBV-602-01				
C762	1-130-493-00	MYLAR	0.068uF	5%	50V	(Canadian, E, Australian)	D953	8-719-200-77	DIODE 10E2N				
C951	1-106-367-00	MYLAR	0.01uF	5%	200V		D954	8-719-200-77	DIODE 10E2N				
C952	1-106-367-00	MYLAR	0.01uF	5%	200V		D955	8-719-200-77	DIODE 10E2N				
C953	1-125-479-11	ELECT	10000uF	20%	63V		D956	8-719-200-77	DIODE 10E2N				
					(US, Canadian)		D957	8-719-002-49	DIODE HZS30-1L				
C953	1-126-358-11	ELECT	10000uF	20%	71V		D968	8-719-001-54	DIODE UZL-11H2 (Canadian)				
C954	1-126-358-11	ELECT	10000uF	20%	71V								
					(Australian, E)		D968	8-719-001-25	DIODE UZL-9H2 (US, Australian, E)				
C954	1-125-479-11	ELECT	10000uF	20%	63V								
					(US, Canadian)								

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks				
< IC >											
IC301	8-759-634-50	IC M5218AL		Q764	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA					
IC501	8-759-634-50	IC M5218AL		Q951	8-729-141-03	TRANSISTOR 2SA733-QP					
IC502	8-759-805-14	IC LC7822		Q958	8-729-209-15	TRANSISTOR 2SD2012 (Canadian)					
IC701	8-759-111-68	IC uPC1237HA		< RESISTOR >							
IC951	8-759-231-53	IC M5F7805L		R139	1-249-417-11	CARBON 1K	5% 1/4W				
IC952	8-759-604-33	IC M5F7812L		R140	1-249-393-11	CARBON 10	5% 1/4W				
IC953	8-759-604-51	IC M5F7912L		R141	△1-249-478-11	CARBON 2.2	5% 1/2W F (Australian, E)				
< IC LINK >											
ICP903	1-532-841-21	LINK IC (Australian, E)		R301	1-247-887-00	CARBON 220K	5% 1/4W				
< JACK >											
J501	1-580-826-11	JACK, PIN (PHONE CD VIDEO)		R302	1-247-887-00	CARBON 220K	5% 1/4W				
< COIL >											
L701	* 1-420-872-00	COIL, AIR CORE		R346	1-247-887-00	CARBON 220K	5% 1/4W				
L751	* 1-420-872-00	COIL, AIR CORE		R351	1-247-887-00	CARBON 220K	5% 1/4W				
< TRANSISTOR >											
Q105	8-729-119-78	TRANSISTOR 2SC2785-HFE		R352	1-247-887-00	CARBON 220K	5% 1/4W				
Q705	8-729-141-06	TRANSISTOR 2SA1142-QPE		R396	1-247-887-00	CARBON 220K	5% 1/4W				
Q706	8-729-209-15	TRANSISTOR 2SD2012		R501	1-249-411-11	CARBON 330	5% 1/4W				
Q707	8-729-141-05	TRANSISTOR 2SC2682-QPE		R502	1-249-417-11	CARBON 1K	5% 1/4W				
Q708	8-729-119-78	TRANSISTOR 2SC2785-HFE		R503	1-249-429-11	CARBON 10K	5% 1/4W				
Q709	8-729-119-76	TRANSISTOR 2SA1175-HFE (Canadian, E, Australian)		R504	1-249-417-11	CARBON 1K	5% 1/4W				
Q709	8-729-620-02	TRANSISTOR 2SA1115-EF (US)		R505	1-249-417-11	CARBON 1K	5% 1/4W				
Q710	8-729-141-46	TRANSISTOR 2SC4431-LK		R506	1-249-417-11	CARBON 1K	5% 1/4W				
Q711	8-729-141-37	TRANSISTOR 2SA1684-LK		R507	1-249-437-11	CARBON 47K	5% 1/4W				
Q712	8-729-320-83	TRANSISTOR 2SC3855-0Y		R508	1-249-416-11	CARBON 820	5% 1/4W				
Q713	8-729-320-86	TRANSISTOR 2SA1491-0Y		R509	1-247-897-11	CARBON 560K	5% 1/4W				
Q714	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA		R510	1-249-437-11	CARBON 47K	5% 1/4W				
Q715	8-729-900-36	TRANSISTOR DTC124ES		R511	1-249-441-11	CARBON 100K	5% 1/4W				
Q755	8-729-141-06	TRANSISTOR 2SA1142-QPE		R512	1-249-409-11	CARBON 220	5% 1/4W				
Q756	8-729-209-15	TRANSISTOR 2SD2012		R513	1-249-425-11	CARBON 4.7K	5% 1/4W				
Q757	8-729-141-05	TRANSISTOR 2SC2682-QPE		R551	1-249-411-11	CARBON 330	5% 1/4W				
Q758	8-729-119-78	TRANSISTOR 2SC2785-HFE		R552	1-249-417-11	CARBON 1K	5% 1/4W				
Q759	8-729-119-76	TRANSISTOR 2SA1175-HFE (Canadian, E, Australian)		R553	1-249-429-11	CARBON 10K	5% 1/4W				
Q759	8-729-620-02	TRANSISTOR 2SA1115-EF (US)		R554	1-249-417-11	CARBON 1K	5% 1/4W				
Q760	8-729-141-46	TRANSISTOR 2SC4431-LK		R555	1-249-417-11	CARBON 1K	5% 1/4W				
Q761	8-729-141-37	TRANSISTOR 2SA1684-LK		R556	1-249-417-11	CARBON 1K	5% 1/4W				
Q762	8-729-320-83	TRANSISTOR 2SC3855-0Y		R557	1-249-437-11	CARBON 47K	5% 1/4W				
Q763	8-729-320-86	TRANSISTOR 2SA1491-0Y		R558	1-249-416-11	CARBON 820	5% 1/4W				
				R559	1-247-897-11	CARBON 560K	5% 1/4W				
				R560	1-249-437-11	CARBON 47K	5% 1/4W				
				R561	1-249-441-11	CARBON 100K	5% 1/4W				
				R562	1-249-409-11	CARBON 220	5% 1/4W				
				R701	1-249-417-11	CARBON 1K	5% 1/4W				
				R712	1-249-435-11	CARBON 33K	5% 1/4W				
				R713	△1-247-692-11	CARBON 22	5% 1/4W				
				R714	1-249-417-11	CARBON 1K	5% 1/4W				

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Ref. No.	Part No.	Description			Remarks	Ref. No.	Part No.	Description			Remarks
R715	1-249-412-11	CARBON	390	5%	1/4W	R773	△1-247-745-11	CARBON	330	5%	1/2W
R716	△1-247-692-11	CARBON	22	5%	1/4W	R774	△1-247-688-11	CARBON	10	5%	1/4W
R717	△1-247-688-11	CARBON	10	5%	1/4W	R775	△1-247-688-11	CARBON	10	5%	1/4W
R718	△1-247-688-11	CARBON	10	5%	1/4W	R776	△1-214-789-00	RES, METAL PLATE 0.1			
R719	△1-247-719-11	CARBON	3.3K	5%	1/4W	R777	△1-214-789-00	RES, METAL PLATE 0.1			
R720	△1-247-713-11	CARBON	1K	5%	1/4W	R778	1-249-393-11	CARBON	10	5%	1/4W
R721	△1-247-713-11	CARBON	1K	5%	1/4W						(US, Canadian, E)
R722	△1-247-717-11	CARBON	2.2K	5%	1/4W	R778	1-247-688-11	CARBON	10	5%	1/4W
R723	△1-247-745-11	CARBON	330	5%	1/2W						(Australian)
R724	△1-247-688-11	CARBON	10	5%	1/4W	R779	1-247-688-11	CARBON	10	5%	1/4W
R725	△1-247-688-11	CARBON	10	5%	1/4W	R779	1-249-393-11	CARBON	10	5%	1/4W
R726	△1-214-789-00	RES, METAL PLATE 0.1									(US, Canadian, E)
R727	△1-214-789-00	RES, METAL PLATE 0.1				R780	1-249-419-11	CARBON	1.5K	5%	1/4W
R728	1-249-393-11	CARBON	10	5%	1/4W	R781	1-249-431-11	CARBON	15K	5%	1/4W
					(US, Canadian, E)	R782	1-249-438-11	CARBON	56K	5%	1/4W
R728	1-247-688-11	CARBON	10	5%	1/4W	R784	1-249-393-11	CARBON	10	5%	1/4W
					(Australian)	R784	1-247-688-11	CARBON	10	5%	1/4W
R729	1-247-688-11	CARBON	10	5%	1/4W						(Australian)
					(Australian)	R789	1-247-688-11	CARBON	10	5%	1/4W
R729	1-249-393-11	CARBON	10	5%	1/4W						(Australian)
					(US, Canadian, E)	R789	1-249-393-11	CARBON	10	5%	1/4W
R730	1-249-419-11	CARBON	1.5K	5%	1/4W						(US, Canadian, E)
R731	1-249-431-11	CARBON	15K	5%	1/4W	R793	1-249-429-11	CARBON	10K	5%	1/4W
R732	1-249-437-11	CARBON	47K	5%	1/4W	R954	△1-216-481-11	METAL OXIDE	1.2K	5%	3W F
R734	1-249-393-11	CARBON	10	5%	1/4W	R955	△1-247-704-11	CARBON	220	5%	1/4W
					(US, Canadian, E)	R956	1-249-426-11	CARBON	5.6K	5%	1/4W
R734	1-247-688-11	CARBON	10	5%	1/4W	R957	1-249-385-11	CARBON	2.2	5%	1/6W
					(Australian)						
R735	1-247-688-11	CARBON	10	5%	1/4W	R958	1-249-385-11	CARBON	2.2	5%	1/6W
					(Australian)	R959	1-249-385-11	CARBON	2.2	5%	1/6W
R735	1-249-393-11	CARBON	10	5%	1/4W	R972	1-249-425-11	CARBON	4.7K	5%	1/4W
					(US, Canadian, E)						(Canadian)
R736	1-249-438-11	CARBON	56K	5%	1/4W						
R737	1-249-433-11	CARBON	22K	5%	1/4W						
R740	1-249-427-11	CARBON	6.8K	5%	1/4W						< RELAY >
R741	1-249-441-11	CARBON	100K	5%	1/4W						
R751	1-249-417-11	CARBON	1K	5%	1/4W						
						RY701	1-515-741-11	RELAY			
R762	1-249-435-11	CARBON	33K	5%	1/4W						< TEST PIN >
R763	△1-247-692-11	CARBON	22	5%	1/4W						
R764	1-249-417-11	CARBON	1K	5%	1/4W						
R765	1-249-412-11	CARBON	390	5%	1/4W	TP701	* 1-560-531-00	PIN, CONNECTOR 5P			
R766	△1-247-692-11	CARBON	22	5%	1/4W						
R767	△1-247-688-11	CARBON	10	5%	1/4W						

R768	△1-247-688-11	CARBON	10	5%	1/4W						
R769	△1-247-719-11	CARBON	3.3K	5%	1/4W						
R770	△1-247-713-11	CARBON	1K	5%	1/4W						
R771	△1-247-713-11	CARBON	1K	5%	1/4W						< CAPACITOR >
R772	△1-247-717-11	CARBON	2.2K	5%	1/4W						
						C107	1-162-294-31	CERAMIC	0.001uF	10%	50V

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RX	SP SW	SP TM	VOL	VOL JOINT
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Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
		< CONNECTOR >				* 1-638-501-11 VOL BOARD	*****
CN106	* 1-565-295-11	PLUG, CONNECTOR 4P					
		< IC >				< CONNECTOR >	
IC102	8-749-920-83	IC GP1U52XB		CN204	* 1-568-826-11	SOCKET, CONNECTOR 7P	
		< RESISTOR >				< VARIABLE RESISTOR >	
R137	1-249-429-11	CARBON 10K 5% 1/4W		RV407	1-241-405-11	RES, VAR, CARBON 100K/100K (MASTER VOLUME)	
R138	1-249-429-11	CARBON 10K 5% 1/4W					*****
		< SWITCH >				* 1-638-502-11 VOL JOINT BOARD	*****
S117	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)					
		< CAPACITOR >					
		*****		C418	1-162-306-11	CERAMIC 0.01uF 20% 16V	
	* 1-638-284-11	SP SW BOARD	*****	C419	1-124-925-11	ELECT 2.2uF 20% 100V	
		< CONNECTOR >		C420	1-124-925-11	ELECT 2.2uF 20% 100V	
CN706	* 1-565-480-11	CONNECTOR, BOARD TO BOARD 4P		C421	1-162-306-11	CERAMIC 0.01uF 20% 16V	
CN708	* 1-506-786-11	PLUG, CONNECTOR (2.5MM) 12P					
		< RESISTOR >				< IC >	
R733	△1-216-431-11	METAL OXIDE 560 5% 1W F		IC402	8-759-820-62	IC LB1639	
R783	△1-216-431-11	METAL OXIDE 560 5% 1W F				< RESISTOR >	
		< SWITCH >		R416	1-249-409-11	CARBON 220 5% 1/4W	
S701	1-572-685-11	SWITCH, ROTARY SLIDE (SPEAKERS)		R417	1-249-425-11	CARBON 4.7K 5% 1/4W	
		< RESISTOR >		R418	1-249-425-11	CARBON 4.7K 5% 1/4W	
		*****					*****
						MISCELLANEOUS	

	* 1-638-287-11	SP TM BOARD	*****	8	1-590-485-11	WIRE, FLAT TYPE (7 CORE)	
		< CONNECTOR >		14	1-590-486-11	WIRE, FLAT TYPE (7 CORE)	
CN705	* 1-564-778-11	PLUG, CONNECTOR (2.5MM) 4P		15	1-590-488-11	WIRE, FLAT TYPE (11 CORE)	
TM701	1-537-341-11	TERMINAL BOARD (8P SP) (SPEAKER A, B)		16	1-590-538-11	WIRE, FLAT TYPE (7 CORE)	
		*****		64	1-535-530-11	PLUG, JUMPER (E)	
				65	△1-569-007-11	ADAPTER, CONVERSION 2P (E)	
				CNP901	△1-551-188-XX	CORD, POWER (E)	
				CNP901	△1-551-478-00	CORD, POWER (US, Canadian)	
				CNP901	△1-559-912-11	CORD, POWER (Australian)	

				T901	△1-450-368-11	TRANSFORMER, POWER (US, Canadian)	
				T901	△1-450-369-11	TRANSFORMER, POWER (E, Australian)	
				VS-1	△* 1-571-515-11	SWITCH, POWER VOLTAGE SELECTION (E)	

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<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>
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ACCESSION & PACKING MATERIAL

* 4-943-620-01 CUSHION

HARDWARE LIST

# 1	7-682-548-04	SCREW +BVTT	3X8 (S)
# 2	7-682-548-09	SCREW +B	3X8
# 3	7-682-561-04	SCREW +BVTT	4X8 (S)
# 4	7-682-949-01	SCREW +PSW	3X10
# 5	7-621-849-00	SCREW, TAPPING	
# 6	7-685-646-79	SCREW +BTP	3X8 TYPE2 N-S